

Record

Received by Dr. L. 1/2/22

507
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Home Notes

from June 18 1908
to

Property of Alex. Graham Bell
1331 Connecticut Avenue
Washington D.C. } winter address

Beinn Bhreagh, near Baddeck,
Nova Scotia, Canada } summer address



1908 June 18 — Thursday — at Hammondenfield. 1

The new Aerodrome A.E.A. No 3 Curtiss "June-bug" is now ready for trial. Experiments will probably be made tomorrow.

Notes from "Aeronautics" — June 1908 p. 35-

The great steps of Aviation in Europe.

1906 Oct 23. — 25 m. by Santos Dumont at Bagatelle
1907 Oct 26. 770 m. by Henry Farman at Issy
1908 Jan. 13. 1000 m. by Farman at Issy (won Deutsch Urkunde) (Prize)
1908 Mar. 21 2004 m. by Farman at Issy
1908 Apr. 11. 3925 m. by Blaergrange at Issy
1908 May 27. 8 min 9 sec. Record duration & telegraph at Rome.

Records of flights of balloons & R. E. A.

1908 Mar. 12. 318 ft 11 inches by Baldwin in Redwing over Lake Keuka, N.Y.
1908 Mar. 17 — Redwing on Lake Keuka destroyed.
1908 May 18. 279 ft (93 sec) by Baldwin in the White wing
1908 May 19. 100 ft. by Selfridge in ^{at race-track} White wing.
" " 240 ft. by Selfridge in White wing.
1908 May 22. 1017 ft. by Curtiss in White wing.
(615 ft - touched + rose wing 402 ft - total 1017 ft)
1908 May 23. 600 ft by McCurdy - machine crashed
Steps.

1908 Mar 12 Baldwin in Redwing 318 ft 11 inches
1908 May 22 Curtiss in Whitewing 615 ft without touching

2² 1908 June 18 — Tuesday at Hammondport

What the Wright Bros. have accomplished.

Aer. Mag.; Aeronautics July 1907 Vol 1 No 1 p. 23

1905 Sept 26. 17,961 meters ($11\frac{1}{8}$ miles)

1905 Sept. 29. 19,570 m. (12 miles)

1905 Sept. 30. — (17 min. 15 sec. in air.)

1905 Oct 3. 24,535 m. ($15\frac{1}{4}$ miles)

1905 Oct 4. 33,456 m. ($20\frac{3}{4}$ miles)

1905 Oct. 5. 38,956 m. ($24\frac{1}{5}$ miles)

Q.E.A. From No 3 Curtiss' June - bug —

Weight

Middle section 124 lbs

Wings — 106 "

Tail — 23 1/2

Front control 11

Machine 264 1/2

Engine &c. — 207

G. H. Curtiss 140

Total weight $611\frac{1}{2}$ lbs.

Surface
of main wing given
estimated by Selfridge
as 370 sq. ft.

Flying-weight.

Weight (say) 612 lbs

Surface 370 sq. ft.

Ratio 1.65 lbs per sq ft.

Flying weight of

From W¹ Selfridge's biplane 1.23 lbs per sq ft

From W² Baldwin's White-wing 1.56 lbs per sq ft

From W³ Curtiss' June-bug 1.65 lbs per sq ft

according to Murdy

1908 June 18 -

Thursday — at Hammonds ³ Park

Through draft for Assoc. meet tomorrow.

The A.E.A. has just completed its third aerodrome "the Flying-Bug" upon plans approved by W. Glent H. Curtis. which were given a trial this afternoon.
This drome is built upon substantially the same models as the Redwing & White-wing differing chiefly in the greater strength of the three-wheeled car that supports the drome when running on the ground. There are also differences and in the detailed mode of working the various controls. The surface of the front control has been increased to 20 square feet and it has been placed and its distance from the main aeroplanes has been increased to — ft.

The whole machine, including the engine and man weighs 612 lbs, and the ~~amount~~ supporting surfaces of the wings are estimated at 370 square feet.

Weight including engine and man, 612 lbs — Supporting surface of wings 370 sq. ft. making the flying weight 1.65 lbs per sq. ft.

The front control, or horizontal rudder for lateral steering up or down has a surface of 20 sq. feet and is placed 9(?) ft in front of the

The aerodrome White-wing was so much injured by the accident of May 23 (?) that

Drome No 1 was Selfridge's Red-wing
Drome No 2 is Baldwin's White-wing
Drome No 3 is Curtis' Flying-Bug

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1908 June 19 — Friday — at Hammondsport.

Body of "June-Bug" made ^{today} a speed on race track estimated at 45 miles per hour — Curtiss thinks it would easily exceed 50 miles per hour on straight track.

Whole machine assembled this evening and started down the track with intention of trying a flight — but tail broke before lifting speed had been obtained. Further experiments postponed. Have sent following dispatch to Associated Press: —

Hammondsport June 19. Preliminary tests of running gear and surfaces were made today with Aerodrome No 3 Curtiss' "June-bug" which extended so late into the evening that there was no time left to make a flight. (Signed) Graham Bell

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Have suggested to Curtiss that the new tail should be bowed like the main wing-piece  so as to be stronger in the middle than at the ends.

June 19 — Friday — at Hammondsport.

Bright boats run from
Montreal to Sydney, N.B., every
week. Two different lines

- (1). Black Diamond line,
- (2) Henry Dobell & Co.

These large boats have a
comfortable cabin & good
meals. These boats don't
run regularly and it would
be a good scheme to telegraph
& find out the exact date
they leave Montreal.

Boat from Toronto to
Montreal leaves every day
about 2 o'clock P.M.

Buffalo	halibut -
Beet:	Iroquois
Second.	Lafayette.
Third	Stablers..

Mrs Melville Bells friends
in Montreal,

Mr & Mrs John Mare.
Montreal West.

Mrs Bells niece,

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1208 June 20 — Part — at Hammondsport

345-593
345-592
345-594
345-595

} by Central to Buffalo N.Y.

Associated Press Telephote.

X Hammondsport N.Y. June 20. An unsuccessful attempt was made this evening to raise the Aerodrome "June-bug" into the air.

Fight Graham Bell

The engine ran on race track well enough but failed to rise when front control was raised.

Inclined to think that the new Naismith used for covering the wings is too porous. Can blow right through it easily.

Mr. Curtiss will put on a coating of paraffine dissolved in gasoline. This should fill up the pores and make fabric air-tight.

He also has some "Silicate of Soda" or "light" glass — which dries off rapidly and leaves fabric air-tight & fire-proof but stuff treated in this way is very heavy.

He also has some fire-proofing material used by Baldwin the balloonist — but doubtful whether this will make fabric air-tight.

Selfridge thinks head resistance has been increased by omission of covered seat. He thinks propeller, which has large slice off one side, does not slope properly. Another propeller is being made.

1908 June 20 — Sat — at Hammondsport 7

Points worthy of notice comparing
plane No 3 with plane No 2.

No 3 is heavier, has greater head-resistance,
wing-surface more porous, & propeller broken
on one side.

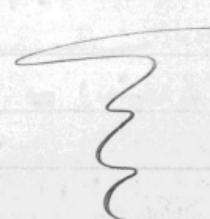
Greater weight & less efficient supporting surface.
Most important defect to my mind is
the porosity of the material covering the
wings. The new tail is of
the concavo-convex form .

The experiment was made this evening
at 7.55 p.m. — when it was getting dark.
about 100 spectators.

Further experiments tomorrow.

Plans: Hubel & I & Miss Cadell leave for
Buffalo tomorrow evening. Will stay
at Grosvenor Hotel — Leave ~~Brantford~~^{Buffalo}
Monday afternoon 4.55 p.m. reaching
Brantford, Ontario about 8 p.m.

Remain Tuesday in Brantford. Leave
Brantford Wed. for Toronto, Ten Thousand
Isles, Montreal, Quebec, & Sydney, N.S.



Consider present cells 40 to the square meter horizontal - and 21 gms per cell including bleeding.

$$\frac{21}{840} \text{ Machine } 840 \text{ gms per m}^2 \text{ horizontal}$$

At 32 cells per m^2 horizontal

$$\begin{array}{r} 840 \\ 672 \\ \hline 21 \\ \hline 11512 \\ 756 \end{array} \quad \frac{32}{\cancel{21}} \quad \text{Machine } 672 \text{ gms per } m^2 \text{ horizontal.}$$

At 40 cells per m^2 horizontal - 4000 cells yield $100 m^2$ horiz.

$$\text{At } 10.75 \text{ sq ft per sq m horiz. } 370 \text{ sq ft} = 34.4 \text{ sq ft}$$

$$10.75 : 1 :: 370 :$$

$$\begin{array}{r} 1075) 370000 (34.4 \\ \underline{32250} \\ 4750 \\ \underline{4300} \\ 4500 \\ \underline{4300} \\ 200 \end{array} \quad \frac{4}{\cancel{2}} \times 2$$

$$\begin{array}{r} 454 \\ 908 \\ 1362 \\ 1816 \\ 2270 \\ 2724 \\ 3178 \\ 3632 \\ 4086 \end{array} \quad \begin{array}{l} 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ 8+ \\ 9+ \end{array}$$

$$(4540 \text{ sq ft})$$



$$1 \text{ lb per sq ft} = 10.75 \text{ lbs per sq m horiz.}$$

$$10 \text{ lbs per } m^2 \text{ horiz.} = 4540 \text{ gms per } m^2$$

or 454000 gms per $100 m^2$

$$1000 \text{ gms per } m^2 = 100000 \text{ gms per } 100 m^2$$

In other words $1 \text{ Kg per } m^2 = 100 \text{ Kg per } 100 m^2$

$$450 \text{ lbs (man + engine)} = 204.300 \text{ Kg.}$$

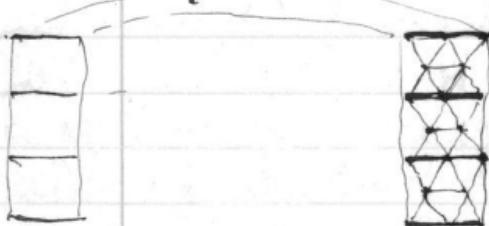
$$\begin{array}{r} 400 = 181600 \\ 50 = 22700 \\ \hline 204300 \end{array} \quad \begin{array}{r} \text{Machine } 840000 \\ \text{wings + engine } 204300 \\ \hline 288300 \end{array}$$

Flying weight with after motor on board $2883 \text{ gms per } m^2$

Total area 1/2 C.L. per 2 ft

If 30 miles per hour will support 2 lbs per sq ft - Then 15 miles per hour should support $\frac{1}{2}$ lb per sq ft.

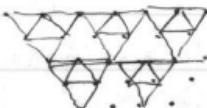
The ring Kite weighed only 240 gm per m^2 horiz. (?) or was it 420 gm? Lightest flying structure yet made. Why not build it one metre high?



This would been aluminum frame OK.

$$\begin{array}{r} 16 \\ \times 21 \\ \hline 16 \\ 32 \\ \hline 33600 \end{array}$$

$40 m^2$ horizontal at 40 cells per m^2 = 1600 cells
1600 cells with ordinary leading at 21 gm = 33.600 kg.



10 1908 June 21 — Sunday — at Hammondsport,

Hammondsport, N. Y.

June 21, '08.

Chas. S. Thompson,
Associated Press,
New York, N. Y.

+ The Aerial Experiment Association's Aerodrome No 3, Curtiss' "June-Bug", made three successful flights here this afternoon with Mr. G. H. Curtiss as aviator.

The first flight was 456 ft. at the rate of 28.1 miles per hour.

The second was 417 ft. at the rate of $31\frac{1}{2}$ miles per hour.

The third was 1266 ft. at the rate of $34\frac{1}{2}$ miles per hour.

This last flight is the longest yet made in public in America and is only Mr. Curtiss' fourth attempt.

Graham Bell.



1908 June 25 -

Wednesday at Toronto 11

Dr. and Mrs. Bell and Miss Cadele arrived at Brantford from Buffalo about 8 p.m., and went immediately to the home of Mrs. George Bellachy. The next afternoon with the "Bell Memorial Association" of Brantford they drove to the old Bell Home and returned by way of Mrs. Frank Cuckshuf's where afternoon tea was served. Wednesday June 24 about one the trio started for Toronto arriving about 3.30. Mr. Bell had an interview with a reporter from the "Toronto Mail" that same evening at the "King Edward" where the party is staying. June the 25th 1908 the following telegram was received from Mr. J. C. D. McCurdy

Hammondsport N.Y. June 25, 1908

Mr. G. Graham Bell,

King Edward Hotel,

Toronto.

Sunbeam made record flight early this morning 125 yards at an elevation of 4000 feet in 41 seconds. Wind 8 to 10 miles an hour blowing. with machine tips worked beautifully and machine under perfect lateral control from rudder inefficient hence descent. Surfaces have been revarnished and colored yellow stretching them tight and absolutely air proof. Nothing materially injured. will

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1908 June 26 Friday en route Prescott to Montreal

try again this evening

J. G. D. McLurkin

Prescott 26 June 1908

Hammondsport N.Y. June 25, 1908.
To Alexander Graham Bell

Prescott Out.

Care of Mr. Toronto or Kingston of
P.C. Steamboat Line which left
Toronto today at two p.m. for
Montreal and if too late to catch
boat repeat to Windsor Hotel
Montreal Que.

"Curtiss flew eleven hundred
and forty yards three thousand
four hundred and twenty
feet in sixty seconds this
evening about 7.30. We have
telegraphed and telephoned
Secretary Aero Club of
America that we are now
ready to try for the Scientific
American Cup. Hurrah!"

Gelfridge

The above telegram was
handed A. G. B. as he

1908 June 26 - Friday - en route Prescott to Montreal 13

landed from the Ste. Toronto
to take the train to Coteau
a proceeding rendered necessary
by the recent bursting of the
bank of the Sault Canal which
prevents the passing up of the
steamer. At Coteau we take to
the river and the rapids at Lachine

1908 June 27 Sat. Montreal Hotel Windsor
Met on steamer Miss Jones a deaf mute
teacher of Flint Mich. who is travelling
alone; two sisters, the Misses Arbaugh
oral teachers, graduates of the Northampton
Normal Class, one now teaching in Indianapolis;
a U. S. Immigration agent in charge of
a young anarchist who had ~~tried to~~ ^{tried to} eluded the
immigration agents and get into the
country across the border. Item. He had
most pathetic brown eyes widely separated
and certainly did not look bad. Reached
Montreal at 5.50 p.m. Hotel by M.G.B.

1908

June 28 - Sunday — at Windsor Hotel,
Montreal
Following are three telegrams sent Friday
at Coleau.

June 26 1908

Mrs. David Fairchild,

"In the Woods"

Glorious news Hammondsport Cutlass flew one
kilometre and will now try for trophy. Both
of you go our expense to witness trial.

M. G. Bell

Pubbles
"You angels
will go like a
shotgun bird starts

Lieu^t Selfridge

Hammondsport N.Y. U.S.A.

Eleven hundred and forty congratulations,
thanks for reaching us. Hurrah!

Mabel G. Bell

June 26 1908

Lieu^t. Thomas E. Selfridge

Great! Would like Fairchild to
witness capture of trophy. Please notify them
also Mr. Lyon.

(signed) Graham Bell

The following telegram was sent this morning-

June 28 1908

Mr. J. G. D. McCurdy

Hammondsport N.Y. U.S.A.

Leave Montreal Monday afternoon steamship Campagne Quebec. S.S. Co. Touching Quebec Tuesday, Gaspe Wednesday, Grand River Thursday landing at Charlottetown Friday. Telegraph news of capture of the trophy.

Graham Bell

1908 July 3rd Friday Off Summerside P.E.I.
Arrived here early this A.M. on the
Campagne Quebec Navigation Co. Glorious
trip bright sunshine fresh exhilarating
air. On Wed evening it was particularly
clear and I could read the small hands
& figures on Alice's watch at 8.45 by daylight.
A. G. B. & Miss Cadel took a walk on
Gaspe Bay at 2 A.M. and it was quite
light there. Saw Perci Rock at 8 A.M.
Thursday. Magnificent thing. Fishermen's
boats duck shaped with red sails
told by Mr. G. B.

1908 July 3

Friday — at Charlottetown
P.E.I.

Arrived here today & SS Campana — staying at Victoria Hotel. Mr. Whitelaw took a drive with us this evening. Mr. & Mrs. Howard with their dear little baby were passengers on Campana. They have gone to some beach on the Northern Shore of Prince Edwards Island.

Curtiss is to try for the Scientific American Trophy tomorrow — and we are all excited over prospect of success.

{

Do not like the way the aviator is pinned into a very small space — difficult to get in — difficult to get out — and very easily hurt in case of accident.

Like the horizontal arm-chair arrangement with foot & trapeze bar in front to cling to. Mr. spark advance, & cut off can be on this bar — also sleeves to work over the controls. Side controls best worked by side movements of body, — because apt to become ineffective. Think also front control could be worked almost automatically by movement of body forward or back — here shifting of body backward should steer front control up — leaning forwards push it down — shifting by clutching gear would thus assist steering action.

1908 July 3 ~ Fairly - at Charlottetown 17
P.E.I.

Telgraph Philip Morris C. had some one
to Hammondsport to see what practicable
features there may be about "flying boat" &c.

Front control had

(light went out after)

1908 July 5 ~ Sunday - at Charlottetown
P.E.I.

(Following telegram received.)

Hammondsport July 2 1908. All arrangements
made with Aero Club for trophy trials
on July fourth at Hammondsport.
(Signed) J.A.D. McCurdy,

Hammondsport, July 3 1908 Flew three
quarters of mile tonight everything O.K.
for July fourth.

(Signed) J.A.D. McCurdy

Hammondsport - July 4 1908. Captured trophy
today, by flying distance of one mile in
one minute and forty two seconds. Flew
full distance of valley came down on
account of trees making beautiful
landing machine under perfect control
and everybody happy.

(Signed) J.A.D. McCurdy

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1908 July 5 — Sunday, — at Charlottetown P. G. I.
(Telegrams continue)

Hammondport July 4 1908. Glorious victory. Curtiss
flew the Kilometre in one minute forty
seconds and five hundred yards beside
everyone missed you and mother
others well telegraph more later.

(several) Daisy.

(Telegrams sent)

Charlottetown July 6 — To Aerial Experiment Association,
Hammondport Wyo., Hoorah for Curtiss, Hoorah
for June Bug Hoorah for A.E.A. and
trophy — leave tomorrow Monday for
Baddeck. Agent. Graham Bell.

Telegrams to ~~Camer~~ Mans Cameron & Lewis
Solicitors & Patents Washington D.C.

Charlottetown, July 5 1908. Please send
some one to Hammondport Wyo. at
once at my expense to examine the
aerodrome of the Aerial Experiment
Association which has just won
the Scientific American trophy for
heavier than air machines. We
want to know what patentable
features there may be about the

.1908 July 5 — Sunday — at Charlottetown 19
P.E.I.

machine. See W. Curtis and report it
by mail to me at Baddeck,
Nova Scotia. Take Lackawanna or
Erie train to Bath local from there
to Hammondsport.

(signed) Graham Bell

Telexam to J. A. Curtis Hammondsport
Charlottetown July 5th 1908. I have telegraphed
Mauro, Cameron and Lewis of Washington
to send patent expert to Hammondsport
to examine gamebug and report to me
what patentable features there may
be about machine. Ask members of
Association to give him every assistance.
Accept our heartiest congratulations
upon your magnificent success.

(signed) Graham Bell

Telexam to J. A. D. McCurdy, Hammondsport,
Charlottetown July 5th 1908. Thanks for
telegrams. I recommend postponing
further experiments until machine has
been examined by patent expert.
Important to keep machine un-injured
until then. fast off for Baddeck.

(signed) Graham Bell

20 1908 July 5 — Sunday, at Charlottetown P.E.I.

Proposed telegram to be sent tomorrow,
to the Aerial Experiment Association
Hammondsport N.Y.

Pictou, N.S.

~~Charlottetown~~ July 6 1908 — If McCurdy wishes to follow on line of June-bug I recommend that McCurdy's machine be now built at Hammondsport and head-quarters be retained there for the present. Mr. Valentine don't run any risk of injuring June-bug until an application for a patent has been prepared. Would like Baldwin to help me in Baddeck soon as possible and when we are ready for motor would like all to come to Baddeck. Telegraph reply to Baddeck. If these plans all

(Signed) Graham Bell

acceptable would simply let it be known that at my request further trials of June-bug will be postponed until we have ~~a~~ another aerodrome completed so that in ~~case~~ of accident to one ^{another will be available for experiments} ~~we can pursue experiments with~~ the other. Would say nothing about patents outside as this would stir up other inventors to forestall us in the patent office. Telegraph reply to Baddeck.
(Signed) Graham Bell

1908 July 7 — Tuesday — at Beaufort 21

The foregoing telegram was sent from
Pictou, N. S., yesterday morning, Monday,
July 6, 1908.

Telegram received from Lieut. Selfridge
to-day as follows:—

~~Hamm~~
Hammondport, N. Y., July 7, 1908 — Meeting
held on receipt of telegram. Decided
to follow your suggestion, which was
in accordance with McCurdy's decision.
Casey and wife start north in a day
or so. (Signed) T. Selfridge.

